EASE DIAGNOSTICS
GM SERVICE PROGRAMMING SYSTEM (SPS)
USER'S MANUAL

Rev 100104

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I. SAFETY PRECAUTIONS

BEFORE WORKING ON ANY VEHICLE, PLEASE READ THIS!

- To avoid possible personal injury and damage to the vehicle, please refer to the appropriate vehicle manufacturer's service procedures and safety instructions.

- Objects can be propelled by moving engine parts. These objects and high pressure fluids and liquids can cause serious injury. ALWAYS wear an ANSI approved eye protection.

- Ensure all sparks, lighted cigarettes, open flames, or any other device capable of producing a high temperature are not utilized near automotive batteries. Automotive batteries contain sulfuric acid and produce explosive gases.

- Ensure a safe distance from all moving engine components during servicing. Test equipment, clothing, and parts of your body can be seriously damaged or injured.

- An operating engine produces carbon monoxide, which is an odorless, colorless, poisonous gas that can lead to serious injury or death. ALWAYS service an operating engine in a well-ventilated area.

- Fuel systems are typically under high pressure. Ensure the area is well ventilated and free of all sparks or other ignition sources to avoid the possibility of fire.

- Ensure the parking brake is engaged, the vehicle’s drive wheels are blocked, and the gear selector is in neutral for manual transmissions and in park for automatics.

- Never set tools on a vehicle’s battery. You may short the terminals together causing harm to yourself, the tools or the battery.

- NEVER attempt to operate this software and drive the vehicle at the same time. ALWAYS have another person to use the software while the vehicle is being driven.

- Do not leave your vehicle unattended while running tests.

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- Customer Service is available at **888-366-3273** from 9:00 am to 5:00 PM Eastern Standard Time. Please have your sales order or invoice number available when you call.
- By Telephone: **570-465-9060**.
- By Fax: **570-465-9061**
- By Mail: EASE Diagnostics State Route 492 Box 3011, New Milford, PA 18834 USA
- By e-mail info@obd2.com. Our website is located at www.obd2.com

IV. TECHNICAL SUPPORT

Where you go for technical support depends on where you purchased your EASE SPS.

I bought the EASE SPS from a sales representative.	▪ Contact your sales representative. ▪ Refer to the EASE website http://www.obd2.com/support/sps/sps_support.htm
I bought the EASE SPS from EASE Diagnostics.	▪ Refer to the EASE website http://www.obd2.com/support/sps/sps_support.htm ▪ Call our Technical support line at 570-465-9062. This support line is answered Monday through Friday from 9:00 am to 5:30 PM Eastern Standard Time. At other times, please leave a message and the call will be returned. ▪ E-mail your questions or comments to techsupport@obd2.com.

V. SYSTEM REQUIREMENTS

MINIMUM DESKTOP PC REQUIREMENTS

The following Desktop PC specifications are the minimum required. Any PC that is below this specification may not perform adequately.

CPU	Intel Pentium® III 600 MHz [1]
Hard Drive	20 GB ATA
RAM	128 MB SDRAM
Video Memory	16 MB DRAM
Optical Drive (CD-ROM/DVD)	16X/40X CD/DVD combo drive
Network Adapter	PCI or ISA Ethernet Network Interface Card
Communications Ports	1 Serial, 1 USB [2]
Monitor	17" SVGA
Operating System	Microsoft® Windows® 2000 Professional or XP Professional
Internet Browser	Internet Explorer 6.0
Anti-Virus Software	Current version of commercially available virus protection
System Recovery	Full Operating System Recovery Package

[1] Non Pentium processors such as Celeron®, Cyrix and AMD are NOT Supported.

[2] For security key only. Reprogramming thru a USB port is not recommended.

MINIMUM LAPTOP PC REQUIREMENTS

The following specifications are the minimum required for the listed validated laptop models. Other laptops are not supported.

Validated Laptop models: Hewlett Packard NC6000, Gateway 450 E/X series, Dell Latitude D800 / D600, and IBM ThinkPad T series Pentium 4

CPU	Intel Pentium® M / Centrino 1.4GHz or higher [1]
Hard Drive	20 GB Ultra ATA
RAM	256MB DDR
Video Memory	32MB DDR
CD-ROM/DVD-ROM	CD/DVD-ROM Drive Combo
Network Adapter	NIC Ethernet Integrated 10/100
Communications Ports	1 Serial, 1 USB [2]
Monitor	14.1" XGA
Operating System	Microsoft® Windows® 2000 Professional or XP Professional
Internet Browser	Internet Explorer 6.0
Anti-Virus Software	Current version of commercially available virus protection
System Recovery	Full Operating System Recovery Package

[1] Non Pentium processors such as Celeron® and AMD are NOT Supported.

[2] For security key only. Reprogramming thru a USB port is not recommended.

VI. STEP-BY-STEP SOFTWARE INSTALLATION INSTRUCTIONS

Three separate software installations must be performed to install all the software required for the SPS. Use the following instructions to install the GM SPS Application, the GM SPS Data and the EASE SPS Assistant software on your PC. Before beginning, verify that your PC meets the PC Requirements, see Section V.

1.0 GM SPS Application Installation Instructions

1. Install TCP/IP Protocol

The TCP/IP protocol must be installed on your PC to use the GM SPS Application software. If you have a network card installed, you only need to verify the TCP/IP protocol is installed. If you already have TCP/IP on your PC, go to step 2 below to install the GM SPS Application software.

To install the TCP/IP protocol,

a. Select ***Start\Settings\Control Panel*** from the Windows Desktop.
b. Double-click on the **Network icon** in the Control Panel Screen.
c. Click **Add** on the Network Screen.
d. Highlight **Adapters** on the Select Network Component Type screen, and then click **Add.**
e. Under "Manufacturers" on the Select Network Adapters screen, scroll down and select **Microsoft**. Under "Network Adapters" at the right, select **Dial-Up Adapter**, and then click **OK**.
f. Click **Add** on the Network Configuration screen. Then select **Protocol** and click **Add** again.
g. On the Select Network Protocol screen, select **Microsoft**, select **TCP/IP** and then click **OK**.
h. Follow the on-screen instructions for loading TCP/IP address information at the Network screen.
i. Select **TCP/IP** and select **Properties**. Select **Specify an IP Address**.
j. Click the first field next to "IP Address" and type 192.109.109.109. Tab to the "Subnet Mask" field and type 255.255.255.0 and then click **OK.**
k. Click **OK** on the Configuration Screen.
l. When the PC prompts you to reboot, click **Yes** to complete the TCP/IP installation.

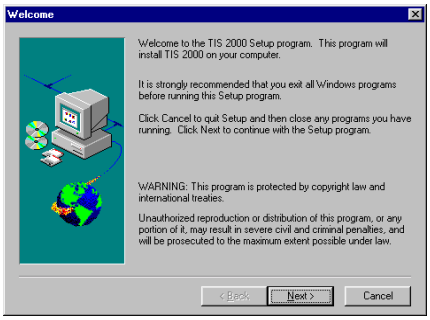
Note: You may be prompted to insert your Windows CD to load the necessary drivers.

NOTE: Do not plug the USB Security Key into the PC until prompted to do so during the install.

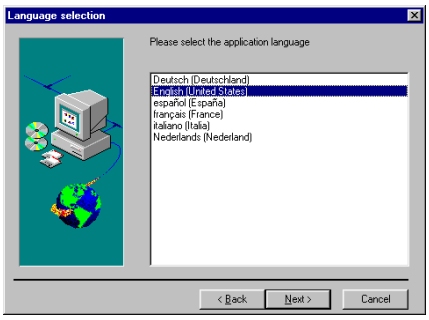
2. Place the GM Application CD in your PC's CD-ROM drive. The CD will start automatically.

NOTE: If the CD does not start automatically, double-click the My Computer icon on the Windows desktop. Locate the CD-ROM drive in the window, double-click the drive letter to display the contents of the CD, and then double-click AUTORUN.EXE.

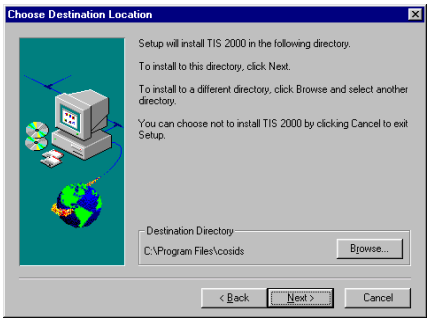
3. Click the Next button on the Welcome Screen.


Welcome
Welcome to the TIS 2000 Setup program. This program will install TIS 2000 on your computer.
It is strongly recommended that you exit all Windows programs before running this Setup program.
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
< Back
Next >
Cancel

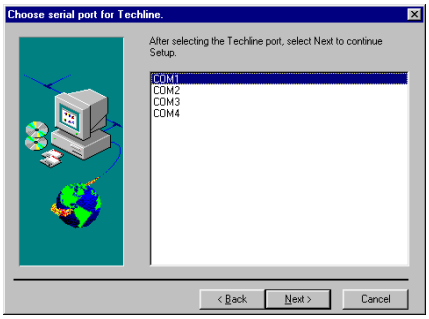
4. In the Language Selection Screen, select your language of choice and then select the Next button.



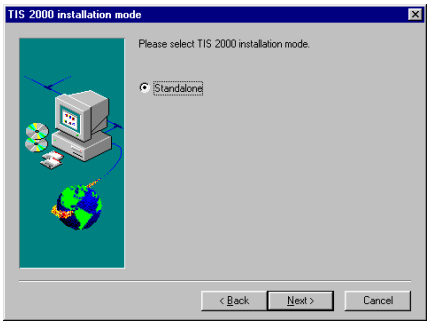
5. In the Choose Destination Location Screen, click Next to install the application to the default location on your C: drive.


Choose Destination Location
Setup will install TIS 2000 in the following directory.
To install to this directory, click Next.
To install to a different directory, click Browse and select another directory.
You can choose not to install TIS 2000 by clicking Cancel to exit Setup.
Destination Directory
C:\Program Files\cosids
Browse...
< Back
Next >
Cancel

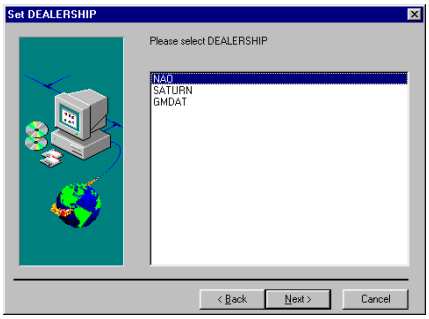
6. In this screen, select the COM (serial) port that the EASE SPS unit will be connected to. Then click the next button. If you do not know which COM port to select, click the next button; you can change this setting in the software after it is installed.



7. In the Installation Mode Screen, click the Next button to copy the Transbase and ODBC database files to your PC.



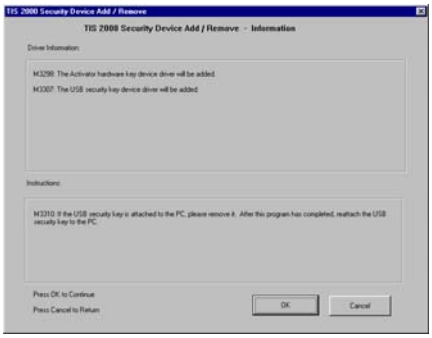
8. At the Set Dealership Screen, select **NAO** (North American Operations) as the dealership option.



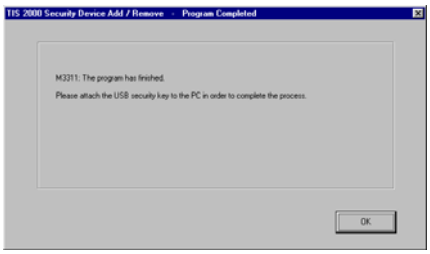
9. Select the “Click here to add” checkbox for the appropriate Security Key at the TIS 2000 Security Add/Remove Screen, and click Continue.

10. Click OK* at the TIS Security Device Add/Remove – Information Screen.

*USB Security Key Note: If the USB Security Key is attached to the PC, remove it before you click OK.

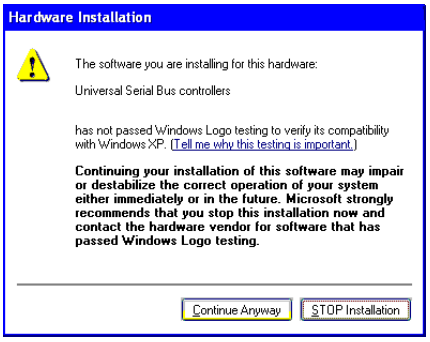


11. USB Security Key Only: At the TIS Security Device Add/Remove – Program Completed Screen connect the USB Security Key to the USB Port before clicking OK.


TIS 2000 Security Device Add / Remove - Program Completed
M3311: The program has finished.
Please attach the USB security key to the PC in order to complete the process.
OK

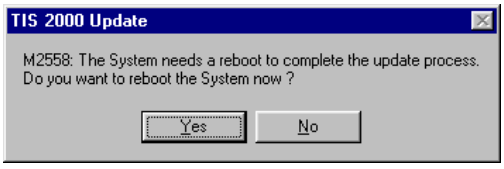
Windows XP Notes: Windows XP may detect the USB Security Key’s driver’s credentials before it attempts to install the driver. A warning screen will be displayed. Click “Continue Anyway” to proceed with the driver install.

If you plug in the USB Security Key on a Windows XP PC after the TIS software has installed the driver and the “Add New Hardware Wizard” launches to assist you in installing the driver, point to the following directory if Windows does not locate the driver automatically: C:/WINDOWS/SYSTEM32.

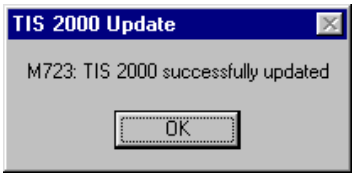

Hardware Installation
The software you are installing for this hardware:
Universal Serial Bus controllers
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

12. Click OK at the Transbase and ODBC Installation Successful screen to initiate TIS installation.

Note: You may be prompted to reboot the computer. If so, select Yes and allow the PC to reboot. When the PC boots back up, the installation will automatically continue.



13. When the installation is complete, a “successfully updated” message box will be displayed. Click the OK button to close this screen. Remove the Application CD from the drive.

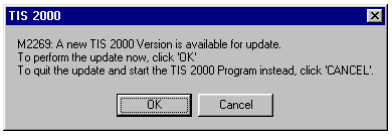


2.0 GM SPS Data CD Installation Instructions

1. Place the GM Data CD in your PC's CD-ROM drive. Wait at least 20 seconds so the CD has time to spin-up.

2. Double-click on the TIS 2000 icon on the Windows Desktop.

3. A TIS 2000 screen will be displayed that states the "A new TIS 2000 Version is available …". Click the OK button to begin copying files to your PC. It could take approximately 10 minutes to copy all the files.


TIS 2000
M2269: A new TIS 2000 Version is available for update.
To perform the update now, click 'OK'.
To quit the update and start the TIS 2000 Program instead, click 'CANCEL'.
OK
Cancel

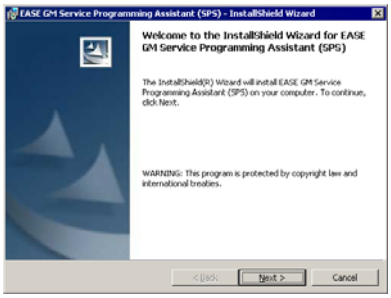
4. When the installation is complete, a "successfully updated" message box will be displayed. Click the OK button to close this screen.

3.0 EASE Service Program Assistant Program Installation Instructions

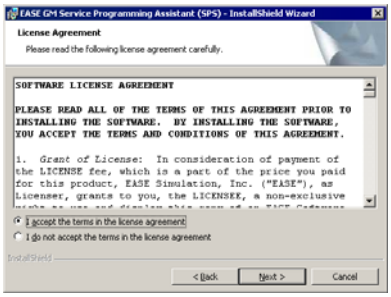
1. Place the EASE Service Programming Assistant CD in your PC's CD-ROM drive. The CD will start automatically.

   NOTE: If the CD does not start automatically, double-click the My Computer icon on the Windows desktop. Locate the CD-ROM drive in the window, double-click the drive letter to display the contents of the CD, and then double-click SETUP.EXE.

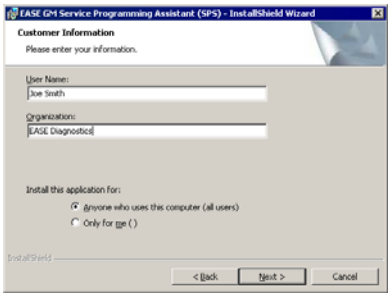
2. Click the Next button on the Welcome Screen.


EASE GM Service Programming Assistant (SPS) - InstallShield Wizard
Welcome to the InstallShield Wizard for EASE GM Service Programming Assistant (SPS)
The InstallShield(R) Wizard will install EASE GM Service Programming Assistant (SPS) on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

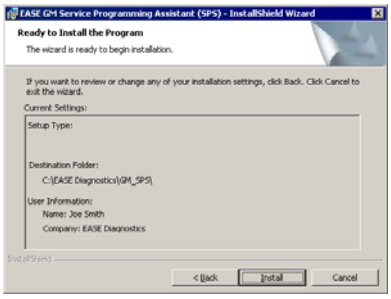
3. The next screen displays the Software License Agreement. Please read the agreement. If you accept the terms of the agreement, click on "I accept the terms in the license agreement". If you do not accept the terms, the software will not be installed. Click the Next button to continue.


EASE GM Service Programming Assistant (SPS) - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
SOFTWARE LICENSE AGREEMENT
PLEASE READ ALL OF THE TERMS OF THIS AGREEMENT PRIOR TO INSTALLING THE SOFTWARE. BY INSTALLING THE SOFTWARE, YOU ACCEPT THE TERMS AND CONDITIONS OF THIS AGREEMENT.
1. Grant of License: In consideration of payment of the LICENSE fee, which is a part of the price you paid for this product, EASE Simulation, Inc. ("EASE"), as Licensor, grants to you, the LICENSEE, a non-exclusive
I accept the terms in the license agreement
I do not accept the terms in the license agreement
InstallShield
< Back
Next >
Cancel

4. Enter the user name and organization. Click the Next button to continue.



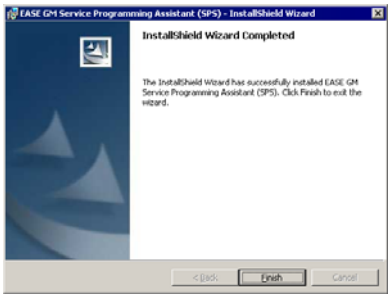
5. At this time the setup program has enough information to start copying files to your PC. Click the Install button to begin copying files to your PC.


EASE GM Service Programming Assistant (SPS) - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
Current Settings:
Setup Type:
Destination Folder:
C:\EASE Diagnostics\GM_SPS\
User Information:
Name: Joe Smith
Company: EASE Diagnostics
InstallShield
< Back
Install
Cancel

7. When the software installation is complete the Setup Complete Screen will be displayed. Click the Finish button to complete the installation process. You may be prompted to restart your PC at this time.

You are now ready to start using your GM Reprogramming system.

IMPORTANT: To ensure a successful reprogramming event always start by launching the EASE SPS Assistant not the GM TIS 2000.


EASE GM Service Programming Assistant (SPS) - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed EASE GM Service Programming Assistant (SPS). Click Finish to exit the wizard.
< Back
Finish
Cancel

EASE SPS

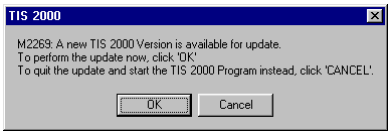
VII. HOW TO INSTALL DATA UPDATES

As they become available from GM (and as long as your CD subscription is valid), you will periodically be shipped a data update CD. When you receive the data update, follow the instructions below to update your SPS data.

1. Place the GM Data CD in your PC's CD-ROM drive. Wait at least 20 seconds so the CD has time to spin-up.

2. Double-click on the TIS 2000 icon on the Windows Desktop.

3. A TIS 2000 screen will be displayed that states the "A new TIS 2000 Version is available …". Click the OK button to begin copying files to your PC. It could take approximately 10 minutes to copy all the files.


TIS 2000
M2269: A new TIS 2000 Version is available for update.
To perform the update now, click 'OK'
To quit the update and start the TIS 2000 Program instead, click 'CANCEL'.
OK
Cancel

4. When the installation is complete, a "successfully updated" message box will be displayed. Click the OK button to close this screen.

VIII. WHAT COMES WITH THE EASE SERVICE PROGRAMMING SYSTEM

SPS Unit

Serial Interface Cable
CABLE-DB9-25

12 VDC 1.5 A Adapter
TR-12VDC-1.5A

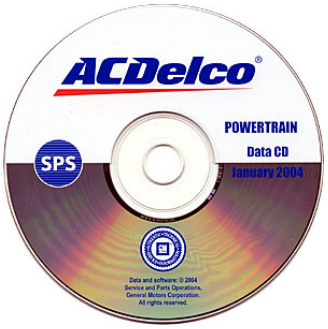
OBD II Cable
CABLE-OBD2

GM OBD I Cable
CABLE-GM1

Cig. Plug Power Cable
CABLE-CIG-PLUG

EASE SPS Assistant CD

GM SPS Application CD



GM SPS Data CD

GMSPS-LOCK-USB

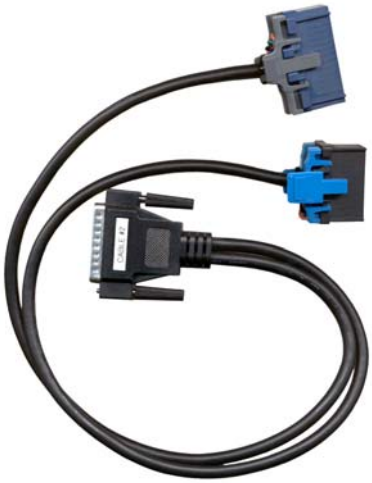
GM Security Key

Spare Battery
BAT-CR1225

Spare Fuse
FUSE-SPS-2

GM SPS OFF-BOARD COMPONENTS

GM SPS Off-Board Cable 1
CBL-GMSPSOB1



GM SPS Off-Board Cable 2
CBL-GMSPSOB2

GM SPS Off-Board Cable 3
CBL-GMSPSOB3

GM SPS Off-Board Cable 4
CBL-GMSPSOB4

GM SPS Off-Board Cable 5
CBL-GMSPSOB5

GM SPS Off-Board Cable 6
CBL-GMSPSOB6

GM SPS Off-Board Cable 7
CBL-GMSPSOB7

IX. HOW TO REPLACE THE BATTERY

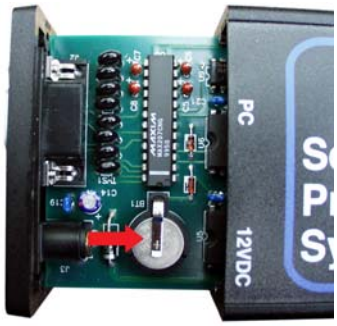
On-board the SPS unit is a small battery that will need to get replaced approximately every 3 months. The battery type is CR1225 3.0V/48mAh Lithium Battery. If the battery level becomes low, the Status will say “Low Battery” in the EASE SPS Assistant. When you get the “Low Battery” status, follow the steps below to replace the battery.

IMPORTANT: You should always keep a spare battery for your EASE GM Reprogrammer. When you use the spare one, order a replacement. Typical battery life with normal use is 3 months. Spare batteries can be ordered through EASE (EASE Part #: BAT-CR1225 Description: CR1225 3.0V/48mAh Lithium Battery). This is not a standard stock item for Radio Shack stores. Your local Radio Shack store may not have it in stock but they should be able to order it for you.

1. Disconnect all cables that are connected to the SPS unit.
2. Use a 3/16” nut driver to remove the two hex-headed screws next to the DB25 connector on the “Vehicle” endplate of the EASE SPS unit.

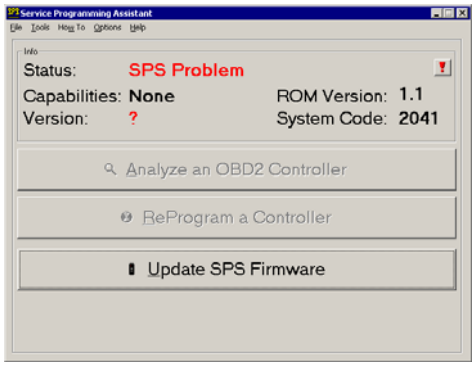
3. Use a Phillips screwdriver to remove the two screws from the PC (DB9) endplate.

4. Grab the bezel on the PC end and slide the circuit card out a few inches.
5. Remove the battery and put the new one in.



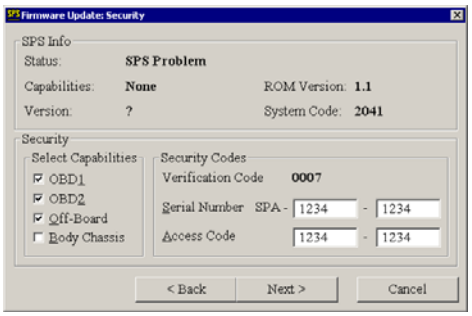
6. Slide the card back in the case and install the screws into both the endplates
7. Connect the Serial Interface Cable to the PC DB9 port on the SPS unit and the PC’s COM port.
8. Power the SPS unit by plugging the AC adapter into the unit and a power source.
9. Start the EASE SPS Assistant Software.

10. Click the **Update SPS Firmware** button.



11. Enter the capabilities, serial number, and access code information for your SPS, if it is not already there. Then click the **Next** button.

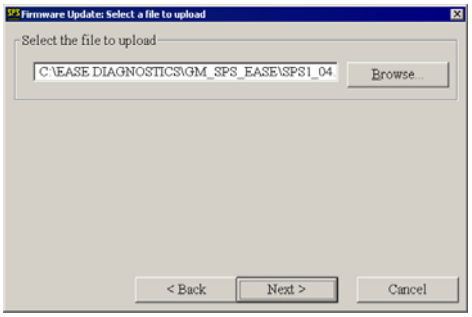
    If you do not have this information, contact EASE by calling 570-465-9062 or by email info@obd2.com. They will provide you the information. Be sure to keep a copy of it for future reference.

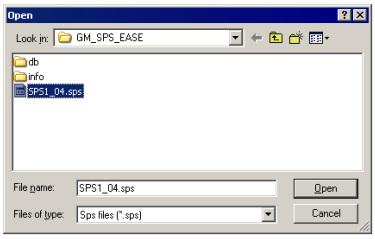


12. In this screen, select the desired firmware file by selecting the **Browse** button. Then click the **Next** button.

    The file extension for the firmware file is .sps. If you have several to choose from, choose the one with the highest number on the end of the filename. The default folder for the firmware files is

    C:\EASE Diagnostics\GM_SPS_EASE

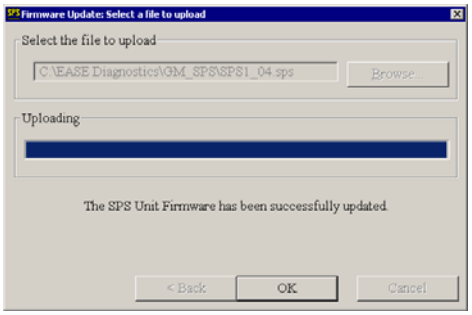




13. The upload progress is shown. When the firmware file has been successfully transferred to the SPS unit, "…successfully upgraded" will be displayed in the bottom half of the screen. Click the **OK** button to close the screen.

    If you were unable to successfully upgrade, check the following and then try again.

    - Check the cable connection
    - Make sure the unit is powered by the AC adapter
    - Make sure the SPS software is configured to the COM (serial) port that you connected the unit to.



X. HOW TO UPDATE THE SPS FIRMWARE AND INSTALL THE ACCESS CODE

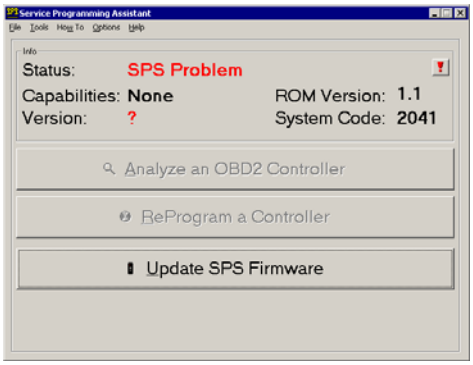
The SPS firmware is saved onboard your SPS unit and contains the program that the SPS needs to function. If you need to upgrade or reload the SPS firmware, follow the instructions below.

1. Connect the Serial Interface Cable to the PC DB9 port on the SPS unit and the PC's COM port.

2. Power the SPS unit by plugging the AC adapter into the unit and a power source.

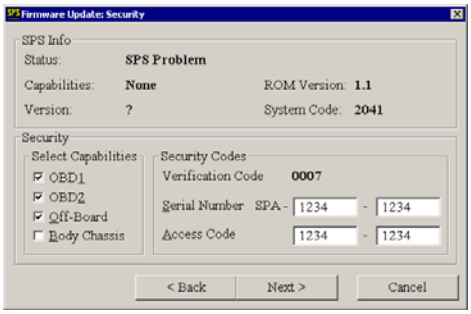
3. Start the EASE Service Programming Assistant Software.

4. Click the **Update SPS Firmware** button.



5. Enter the capabilities, serial number, and access code information for your SPS, if it is not already there. Then click the **Next** button.

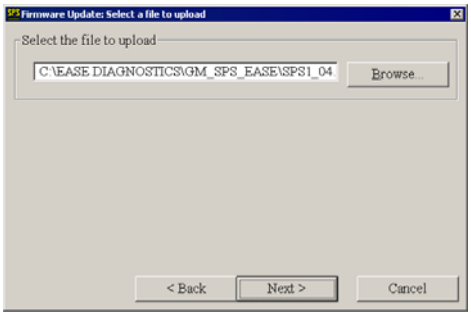
   If you do not have this information, contact EASE by calling 570-465-9062 or by email info@obd2.com. They will provide you the information. Be sure to keep a copy of it for future reference.

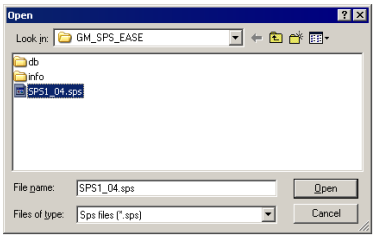


6. In this screen, select the desired firmware file by selecting the **Browse** button. Then click the **Next** button.

   The file extension for the firmware file is .sps. If you have several to choose from, choose the one with the highest number on the end of the filename. The default folder for the firmware files is

   C:\EASE Diagnostics\GM_SPS_EASE

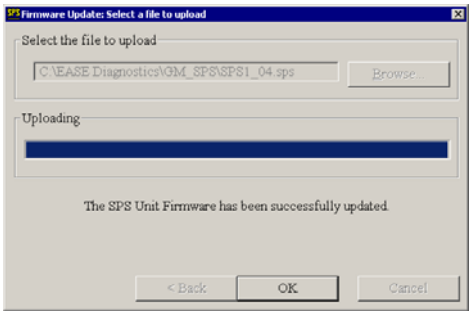




7. The upload progress is shown. When the firmware file has been successfully transferred to the SPS unit, "…successfully upgraded" will be displayed in the bottom half of the screen. Click the **OK** button to close the screen.

   If you were unable to successfully upgrade, check the following and then try again.

   - Check the cable connection
   - Make sure the unit is powered by the AC adapter
   - Make sure the SPS software is configured to the COM (serial) port that you connected the unit to.



X. HOW TO REPLACE THE SPS FUSE

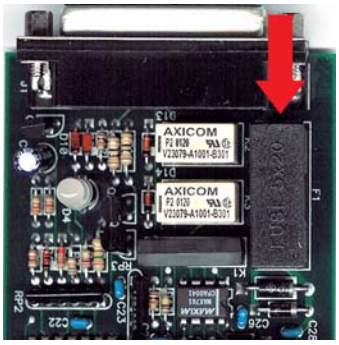
The SPS Unit has a fuse that is used to protect the SPS Unit from short-circuited off-board controller hookups. The fuse is usually blown when analyzing or reprogramming an off-board controller, which has an internal problem or is wired the wrong way. If the SPS Problem displayed on the EASE SPS Assistant Software says “Bad Fuse”, the fuse needs to be replaced. The fuse used by the SPS unit is a 5x20 mm 1.6A SloBlo fuse. If you do not have a spare fuse, call EASE or your sales representative to order one - Part # FUSE-SPS-2.

IMPORTANT: Replace the fuse only with the one specified. Failure to do so could damage the SPS unit and/or the controller that you are reprogramming.

1. Disconnect all cables that are connected to the SPS unit.
2. Use a 3/16” nut driver to remove the two hex-headed screws next to the DB25 connector on the “Vehicle” endplate of the EASE SPS unit.

3. Use a Phillips screwdriver to remove the two screws from the PC (DB9) endplate.

4. Grab the bezel on the PC end and slide the circuit card out. The fuse is located under a black fuse cover near the DB25 end of the SPS unit.
5. Remove the fuse and put the new one in.
6. Slide the card back in the case and install the screws into both the endplates



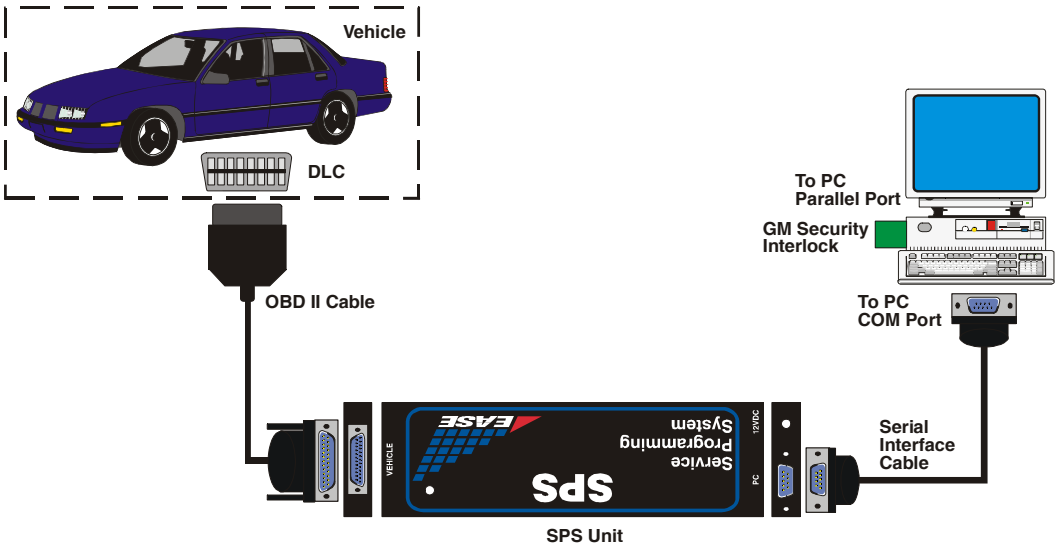
XII. ON-BOARD POWERTRAIN REPROGRAMMING SETUP

1.0 GM OBD II Vehicles (1996 and newer)

1. Connect the serial interface cable to the PC's serial (COM) port and the PC port on the SPS unit.
2. Connect the GM Security Key to the parallel (LPT) or USB port on the PC.

NOTE: The GM Security Key (parallel or USB) is required to use the GM SPS software to reprogram a vehicle.

3. Connect the OBD II Cable to the vehicle's diagnostic connector and the VEHICLE port on the SPS unit.
4. Start the EASE SPS Assistant Software to begin the reprogramming event. Do not start the GM TIS 2000 software. The EASE software will start the GM TIS 2000 software when it is needed.

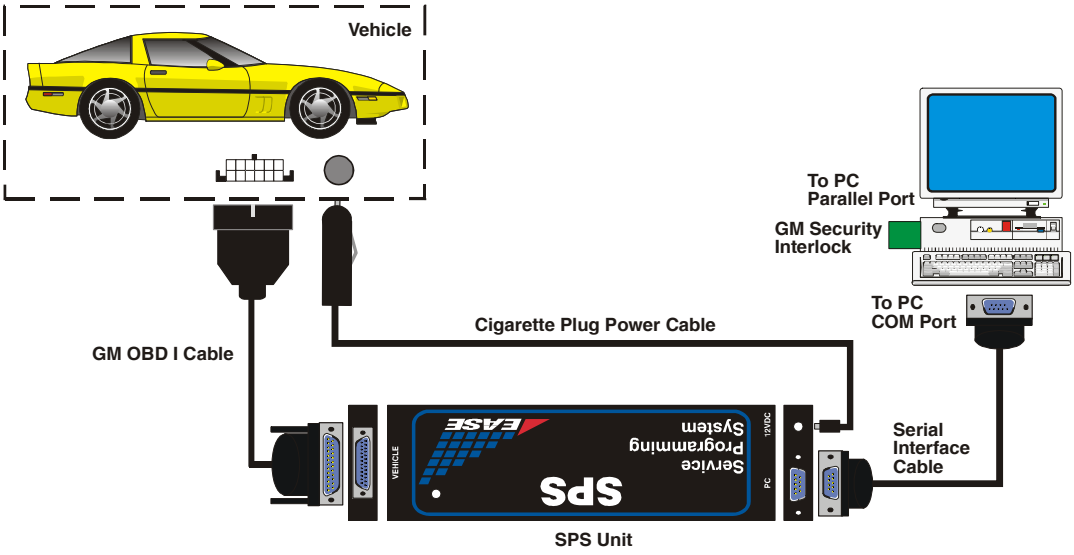


2.0 GM OBD I Vehicles (1993-95)

1. Connect the serial interface cable to the PC's serial (COM) port and the PC port on the SPS unit.
2. Connect the GM Security Key to the parallel (LPT) or USB port on the PC.

NOTE: The GM Security Key (parallel or USB) is required to use the GM SPS software to reprogram a vehicle.

3. Connect the GM OBD I Cable or OBD II Cable to the vehicle's diagnostic connector and the VEHICLE port on the SPS unit.
4. Connect the Cigarette Plug Power Cable to the 12VDC port on the SPS unit and the vehicle's lighter receptacle.
5. Start the EASE SPS Assistant Software to begin the reprogramming event. Do not start the GM TIS 2000 software. The EASE software will start the GM TIS 2000 software when it is needed.



XIII. OFF-BOARD REPROGRAMMING SETUP

1. Connect the serial interface cable to the PC's serial (COM) port and the PC port on the SPS unit.

2. Connect the GM Security Key to the parallel (LPT) or USB port on the PC.

NOTE: The GM Security Key (parallel or USB) is required to use the GM SPS software to reprogram a vehicle.

3. Look up the Off-board Cable required for the vehicle's controller that you are reprogramming in the tables in Appendix B, C or D. A table is also available in the EASE Software Assistant by selecting *How to\Find Off-board SPS Cables* from the menu bar.

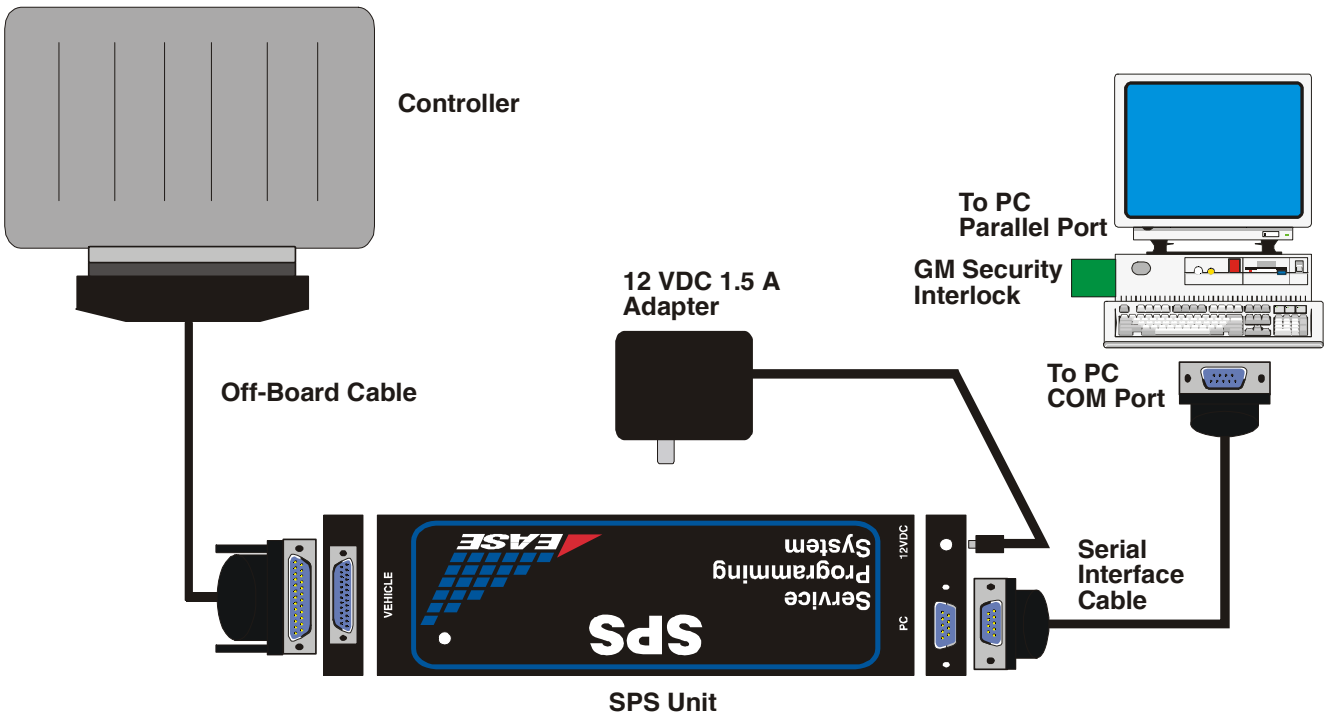
IMPORTANT: Just because a cable can connect to a controller does not mean it is the correct cable. Use the cable listed in Appendix B, C, or D or the software. Failure to do so could damage the controller or the SPS unit.

4. Connect the specified cable to the controller and the VEHICLE port on the SPS unit.

5. Connect the 12 VDC **1.5A** adapter to the 12VDC port on the SPS unit and plug the other end into a power source.

IMPORTANT: The power adapter used to power the SPS unit must have an output of **12 VDC and 1.5 Amps**.

6. Start the EASE SPS Assistant Software to begin the reprogramming event. Do not start the GM TIS 2000 software. The EASE software will start the GM TIS 2000 software when it is needed.



APPENDIX A. GM VEHICLES THAT SUPPORT REPROGRAMMING

Model Year	Vehicle Model (VIN Code)	Engine Type (VIN Code)	Transmission	Emission Type
1993	GEO Storm (R)	1.6L SOHC	Manual/Auto	Federal/Cal
1993	GEO Storm (R)	1.8L DOHC	Manual/Auto	Federal/Cal
1993	A-Car	2.2L LN2 (4)	Automatic	Federal/Cal
1993	Cavalier (J)	2.2L LN2 (4)	Auto/Manual	Federal/Cal
1993	Beretta (L)	2.2L LN2 (4)	Auto/Manual	Federal/Cal
1993	Corsica (L)	2.2L LN2 (4)	Auto/Manual	Federal/Cal
1993	W-Car	2.2L LN2 (4)	Automatic	Federal/Cal
1993	W-Car (Olds)	3.1L L82 (M)	Auto 4 Speed	Federal/Cal
1993	W-Car	3.1L LH0 (T)	Auto 4 Speed	California
1993	F-Car	3.4L L32 (S)	Manual/Auto	Fed/Cal/Exp
1993	S/T Truck (Pickup Only)	4.3L LB4 (Z)	Manual	Federal/Cal
1994	B-Car	4.3L L99 (W)	Automatic	Fed/Cal/Exp
1994	B-Car	5.7L LT1 (P)	Automatic	Fed/Cal/Exp
1994	D-Car	5.7L LT1 (P)	Automatic	Fed/Cal/Exp
1994	F-Car	3.4L L32 (S)	Manual/Auto	Federal/Cal
1994	F-Car	5.7L LT1 (P)	Manual/Auto	Fed/Cal/Exp
1994	L-Car	3.1L L82 (M)	Automatic	Fed/Cal/Exp
1994	N-Car	3.1L L82 (M)	Automatic	Federal/Cal
1994	W-Car	3.1L L82 (M)	Automatic	Fed/Cal/Exp
1994	Y-Car	5.7L LT1 (P)	Manual/Auto	Fed/Cal/Exp
1994	S/T Truck (Pickup Only)	4.3L LB4 (Z)	Manual	Federal/Cal
1995	B-Car	4.3L L99 (W)	Automatic	Fed/Cal/Exp
1995	B-Car	5.7L LT1 (P)	Automatic	Fed/Cal/Exp
1995	D-Car	5.7L LT1 (P)	Automatic	Fed/Cal/Exp
1995	F-Car	3.4L L32 (S)	Manual/Auto	Federal/Cal
1995	F-Car	3.8L L36 (K)	Automatic	Federal/Cal
1995	F-Car	5.7L LT1 (P)	Manual/Auto	Fed/Cal/Exp
1995	J-Car	2.3L LD2 (D)	Automatic	Federal/Cal
1995	L-Car	3.1L L82 (M)	Automatic	Fed/Cal/Exp
1995	N-Car	3.1L L82 (M)	Automatic	Federal/Cal
1995	W-Car	3.1L L82 (M)	Automatic	Fed/Cal/Exp
1995	Y-Car	5.7L LT1 (P)	Manual/Auto	Fed/Cal/Exp
1995	S/T Pickup	4.3L LB4 (Z)	Manual	Federal/Cal
1995	S/T Truck (except S/T trucks with RPO K29. See vehicle RPO sticker)	4.3L L35 (W)	Manual/Auto	Federal/Cal
1996+	All 1996 and newer model year General Motors vehicles, with the exception of medium duty trucks, the Catera, and GEO products can be reprogrammed.			

APPENDIX B. OFF-BOARD CABLE LISTING BY VEHICLE MODEL YEAR

Model Year	Body	Engine	EASE Cable	Connector Color	Kent Moore Cable
1990	R	1.6L LO1 VIN 6	2	Black	1
1991	R	1.6L LO1 VIN 6	2	Black	1
1991	R	1.8L LV6 VIN 8	2	Black	1
1992	A, J	2.2L LN2 VIN 4	4	Pink	2
1992	R	1.6L LO1 VIN 6	2	Black	1
1992	R	1.8L LV6 VIN 8	2	Black	1
1993	A, J	2.2L LN2 VIN 4	4	Pink	2
1993	F	3.4L L32 VIN S	3	Blue & Smoke	2
1993	L	2.2L LN2 VIN 4	4	Pink	2
1993	R	1.6L LO1 VIN 6	2	Black	1
1993	R	1.8L LV6 VIN 8	2	Black	1
1993	S/T Pickup	4.3L LB4 VIN Z	2	Blue	1
1993	W	3.1L LH0 VIN T	3	Blue & Smoke	2
1994	B	4.3L L99 VIN W	3	Blue & Smoke	2
1994	B, D, Y	5.7L LT1 VIN P	3	Blue & Smoke	2
1994	F	3.4L L32 VIN S	3	Blue & Smoke	2
1994	F	5.7L LT1 VIN P	3	Blue & Smoke	2
1994	L, N, W	3.1L L82 VIN M	3	Blue & Smoke	2
1994	R	1.6L LO1 VIN 6	2	Black	1
1994	R	1.8L LV6 VIN 8	2	Black	1
1994	S/T pickup	4.3L LB4 VIN Z	1	Clear	1
1995	B	4.3L L99 VIN W	3	Blue & Smoke	2
1995	B, D, Y	5.7L LT1 VIN P	3	Blue & Smoke	2
1995	F	3.4L L32 VIN S	3	Blue & Smoke	2
1995	F	3.8L L36 VIN K	6	Blue	4
1995	F	5.7L LT1 VIN P	3	Blue & Smoke	2
1995	J	2.3L LD2 VIN D	1	Clear	1
1995	L, N, W	3.1L L82 VIN M	3	Blue & Smoke	2
1995	S/T pickup	4.3L LB4 VIN Z	1	Clear	1
1995	S/T Truck	4.3L L35 VIN W	7	Smoked	3
1996	A, J, L, S/T Truck	2.2L LN2 VIN 4	1	Clear	1
1996	A, L, N, W	3.1L L82 VIN M	6	Blue	4
1996	B	4.3L L99 VIN W	3	Blue & Smoke	2
1996	B, D, Y	5.7L LT1 VIN P	3	Blue & Smoke	2
1996	C, G, H	3.8L L67 VIN 1	6	Blue	4
1996	C, G, H, W	3.8L L36 VIN K	6	Blue	4
1996	C/K Truck	6.5L L56 VIN S	5	Light Blue	4
1996	C/K, G Truck	5.0L L30 VIN M	7	Smoked	3
1996	C/K, G, L/M, P Truck	4.3L L35 VIN W	7	Smoked	3
1996	C/K, G, P Truck	5.7L L31 VIN R	7	Smoked	3
1996	C/K, G, P Truck	6.5L L65 VIN F	5	Light Blue	4
1996	C/K, G, P Truck	7.4L L29 VIN J	7	Smoked	3
1996	E, K	4.6L L37 VIN 9	6	Blue	4
1996	E, K	4.6L LD8 VIN Y	6	Blue	4
1996	F	3.8L L36 VIN K	6	Blue	4
1996	F	5.7L LT1 VIN P	3	Blue & Smoke	2
1996	G	4.0L L47 VIN C	6	Blue	4
1996	J, N	2.4L LD9 VIN T	1	Clear	1
1996	S/T Truck	4.3L L35 VIN W	7	Smoked	3
1996	S/T Truck	4.3L LF6 VIN X	7	Smoked	3
1996	U Van	3.4L LA1 VIN E	6	Blue	4
1996	W	3.4L LQ1 VIN X	6	Blue	4
1996	Y	5.7L LT4 VIN 5	3	Blue & Smoke	2

OFF-BOARD CABLE LISTING BY VEHICLE MODEL YEAR (CONTINUED)

Model Year	Body	Engine	EASE Cable	Connector Color	Kent Moore Cable
1997	C, G, H	3.8L L67 VIN 1	6	Blue	4
1997	C, G, H, W	3.8L L36 VIN K	6	Blue	4
1997	C/K Truck	6.5L L56 VIN S	5	Light Blue	4
1997	C/K, G Truck	5.0L L30 VIN M	7	Smoked	3
1997	C/K, G, L/M, P Truck	4.3L L35 VIN W	7	Smoked	3
1997	C/K, G, P Truck	5.7L L31 VIN R	7	Smoked	3
1997	C/K, G, P Truck	6.5L L65 VIN F	5	Light Blue	4
1997	C/K, G, P Truck	7.4L L29 VIN J	7	Smoked	3
1997	C6/C7, P6/B7	6.5L L65 VIN F	5	Light Blue	4
1997	E, K	4.6L L37 VIN 9	6	Blue	4
1997	E, K	4.6L LD8 VIN Y	6	Blue	4
1997	F	3.8L L36 VIN K	6	Blue	4
1997	F	5.7L LT1 VIN P	3	Blue & Smoke	2
1997	G	4.0L L47 VIN C	6	Blue	4
1997	J, N	2.4L LD9 VIN T	6	Blue	4
1997	J, S/T Truck	2.2L LN2 VIN 4	6	Blue	4
1997	N, W	3.1L L82 VIN M	6	Blue	4
1997	S/T Truck	4.3L L35 VIN W	7	Smoked	3
1997	S/T Truck	4.3L LF6 VIN X	7	Smoked	3
1997	U Van	3.4L LA1 VIN E	6	Blue	4
1997	W	3.4L LQ1 VIN X	6	Blue	4
1997	W	3.8L L67 VIN 1	6	Blue	4
1997	W4	5.7L L31 VIN R	7	Smoked	3
1997	Y	5.7L LS1 VIN G	6	Blue	4
1997	Z	1.9L L24 VIN 8	5	Light Blue	4
1997	Z	1.9L LLO VIN 7	5	Light Blue	4
1998	All applications except Truck VCM	Diesel	5	Light Blue	4
		Gasoline	6	Blue	4
1998	All Truck VCM Applications		7	Smoked	3
1999	All applications except Truck VCM	Diesel	5	Light Blue	4
		Gasoline	6	Blue	4
1999	All Truck VCM Applications		7	Smoked	3
2000	All applications except Truck VCM	Diesel	5	Light Blue	4
		Gasoline	6	Blue	4
2000	All Truck VCM Applications		7	Smoked	3
2001+	All applications		6	Blue	4

APPENDIX C. OFF-BOARD CABLE LISTING BY VEHICLE CONTROLLER

Controller Module	Model Year(s)	Body/Engine		EASE Cable	Kent Moore Cable
SFI66U	1993-95	F,L,N,W		3	2
VCMX-I	1993	S,T		2	1
VCMX-M	1994-95	S,T		1	1
VCMX-A	1995	S,T		7	3
VCMX-A	1996	S,T,C,K		7	3
PCM66U	1994-95	B,D,F,Y		3	2
PCM-66U	1996	B,D,Y,F	5.7	3	2
PCM-66U	1997	F	5.7	3	2
PCM-66U(D96A)	1996-99	G	4.0	6	4
PCM-66U(D96A)	1996-99	E,K	4.6	6	4
PCM-32U	1995	F	3.8	6	4
PCM-32U	1996			6	4
PCM-6SU	1996	J,N		1	1
PCM-6	1996-2000	Diesel		5	4
PCM32U(F97A)	1997	N,W	3.1	6	4
PCM32U(F97A)	1997	U-Van	3.4	6	4
PCM32U(F97B)	1997	C,F,G	3.8(K)	6	4
PCM32U(F97B)	1997	C,G,H,W	3.8(I)	6	4
PCM32U(F97B)	1997	W	3.4(X)	6	4
PCM32U(W97A)	1997	F,Y,W	5.7(G)	6	4
PCM32U/L97A	1997-99	J,N	2.2,2.4	6	4
PCM32U/L97A	1997-99	S,T Truck	2.2,2.4	6	4
VCMX-A(T97A)	1997	M,L	4.3	7	3
VCMX-A(T97A)	1997	G-Van	All	7	3
VCMX-A(T97A)	1997	C,K,S,T	All except 2.4	7	3
PCM32U(F98A)	1998	N,W	3.1	6	4
PCM32U(F98A)	1998	W	3.4	6	4
PCM32U(F98A)	1998	C,G,F,H,W	3.8	6	4
PCM32U(W97B)	1998	F,Y	5.7	6	4
VCMXA(T98A)	1998	G,L,M-Van		7	3
VCMXA(T98A)	1998	S,T,C,K	All except 2.2,2.4	7	3
PCM32U(F99A)	1999-2000	N,W,C,G,F,H,U-Van	3.1,3.4,3.5,3.8	6	4
VCMX-A(T99A)	1999-2000	C,K,S,T,M,L,P,G	4.3,5.0,5.7,7.4	7	3
PCM32U(W99A)	1999-2000	F,Y	5.7	6	4
PCM32U(L99-PM2)	2000	J,N,S,T Truck	2.2,2.4	6	4
PCM-32U(F00A)	2000	H/W Olds	3.5(LX5)	6	4
PCM-167U (Siemens)	2000	G,E,K Cadillac	4.0,4.6	6	4

APPENDIX D. OFF-BOARD CABLE LISTING BY CABLE NUMBER

EASE Cable	Connector Color	Model Years	Body	Engine	Kent Moore Cable
1	Clear	1994	S/T pickup	4.3L LB4 VIN Z	1
1	Clear	1995	J	2.3L LD2 VIN D	1
1	Clear	1995	S/T pickup	4.3L LB4 VIN Z	1
1	Clear	1996	A, J, L, S/T Truck	2.2L LN2 VIN 4	1
1	Clear	1996	J, N	2.4L LD9 VIN T	1
2	Black	1990	R	1.6L LO1 VIN 6	1
2	Black	1991	R	1.6L LO1 VIN 6	1
2	Black	1991	R	1.8L LV6 VIN 8	1
2	Black	1992	R	1.6L LO1 VIN 6	1
2	Black	1992	R	1.8L LV6 VIN 8	1
2	Black	1993	R	1.6L LO1 VIN 6	1
2	Black	1993	R	1.8L LV6 VIN 8	1
2	Black	1994	R	1.6L LO1 VIN 6	1
2	Black	1994	R	1.8L LV6 VIN 8	1
2	Black	1993	S/T Pickup	4.3L LB4 VIN Z	1
3	Blue & Smoke	1993	F	3.4L L32 VIN S	2
3	Blue & Smoke	1993	W	3.1L LH0 VIN T	2
3	Blue & Smoke	1994	B	4.3L L99 VIN W	2
3	Blue & Smoke	1994	B, D, Y	5.7L LT1 VIN P	2
3	Blue & Smoke	1994	F	3.4L L32 VIN S	2
3	Blue & Smoke	1994	F	5.7L LT1 VIN P	2
3	Blue & Smoke	1994	L, N, W	3.1L L82 VIN M	2
3	Blue & Smoke	1995	B	4.3L L99 VIN W	2
3	Blue & Smoke	1995	B, D, Y	5.7L LT1 VIN P	2
3	Blue & Smoke	1995	F	3.4L L32 VIN S	2
3	Blue & Smoke	1995	F	5.7L LT1 VIN P	2
3	Blue & Smoke	1995	L, N, W	3.1L L82 VIN M	2
3	Blue & Smoke	1996	B	4.3L L99 VIN W	2
3	Blue & Smoke	1996	B, D, Y	5.7L LT1 VIN P	2
3	Blue & Smoke	1996	F	5.7L LT1 VIN P	2
3	Blue & Smoke	1996	Y	5.7L LT4 VIN 5	2
3	Blue & Smoke	1997	F	5.7L LT1 VIN P	2
4	Pink	1992	A, J	2.2L LN2 VIN 4	2
4	Pink	1993	A, J	2.2L LN2 VIN 4	2
4	Pink	1993	L	2.2L LN2 VIN 4	2
5	Light Blue	1996	C/K Truck	6.5L L56 VIN S	4
5	Light Blue	1996	C/K, G, P Truck	6.5L L65 VIN F	4
5	Light Blue	1997	C/K Truck	6.5L L56 VIN S	4
5	Light Blue	1997	C/K, G, P Truck	6.5L L65 VIN F	4
5	Light Blue	1997	C6/C7, P6/B7	6.5L L65 VIN F	4
5	Light Blue	1997	Z	1.9L L24 VIN 8	4
5	Light Blue	1997	Z	1.9L LLO VIN 7	4
5	Light Blue	1998	All applications except Truck VCM		4
5	Light Blue	1999	All applications except Truck VCM		4
5	Light Blue	2000	All applications except Truck VCM		4
6	Blue	1995	F	3.8L L36 VIN K	4
6	Blue	1996	A, L, N, W	3.1L L82 VIN M	4
6	Blue	1996	C, G, H	3.8L L67 VIN 1	4
6	Blue	1996	C, G, H, W	3.8L L36 VIN K	4
6	Blue	1996	E, K	4.6L L37 VIN 9	4
6	Blue	1996	E, K	4.6L LD8 VIN Y	4
6	Blue	1996	F	3.8L L36 VIN K	4
6	Blue	1996	G	4.0L L47 VIN C	4

EASE Cable	Connector Color	Model Years	Body	Engine	Kent Moore Cable
6	Blue	1996	U Van	3.4L LA1 VIN E	4
6	Blue	1996	W	3.4L LQ1 VIN X	4
6	Blue	1997	C, G, H	3.8L L67 VIN 1	4
6	Blue	1997	C, G, H, W	3.8L L36 VIN K	4
6	Blue	1997	E, K	4.6L L37 VIN 9	4
6	Blue	1997	E, K	4.6L LD8 VIN Y	4
6	Blue	1997	F	3.8L L36 VIN K	4
6	Blue	1997	G	4.0L L47 VIN C	4
6	Blue	1997	J, N	2.4L LD9 VIN T	4
6	Blue	1997	J, S/T Truck	2.2L LN2 VIN 4	4
6	Blue	1997	N, W	3.1L L82 VIN M	4
6	Blue	1997	U Van	3.4L LA1 VIN E	4
6	Blue	1997	W	3.4L LQ1 VIN X	4
6	Blue	1997	W	3.8L L67 VIN 1	4
6	Blue	1997	Y	5.7L LS1 VIN G	4
6	Blue	1998	All applications except Truck VCM		4
6	Blue	1999	All applications except Truck VCM		4
6	Blue	2000	All applications except Truck VCM		4
6	Blue	2001+	All applications		4
7	Smoked	1995	S/T Truck	4.3L L35 VIN W	3
7	Smoked	1996	C/K, G Truck	5.0L L30 VIN M	3
7	Smoked	1996	C/K, G, L/M, P Truck	4.3L L35 VIN W	3
7	Smoked	1996	C/K, G, P Truck	5.7L L31 VIN R	3
7	Smoked	1996	C/K, G, P Truck	7.4L L29 VIN J	3
7	Smoked	1996	S/T Truck	4.3L L35 VIN W	3
7	Smoked	1996	S/T Truck	4.3L LF6 VIN X	3
7	Smoked	1997	C/K, G Truck	5.0L L30 VIN M	3
7	Smoked	1997	C/K, G, L/M, P Truck	4.3L L35 VIN W	3
7	Smoked	1997	C/K, G, P Truck	5.7L L31 VIN R	3
7	Smoked	1997	C/K, G, P Truck	7.4L L29 VIN J	3
7	Smoked	1997	S/T Truck	4.3L L35 VIN W	3
7	Smoked	1997	S/T Truck	4.3L LF6 VIN X	3
7	Smoked	1997	W4	5.7L L31 VIN R	3
7	Smoked	1998	All Truck VCM Applications		3
7	Smoked	1999	All Truck VCM Applications		3
7	Smoked	2000	All Truck VCM Applications		3

APPENDIX E. SPS TECHNICAL SUPPORT FAQ'S

GENERAL QUESTIONS

Which GM Vehicles support reprogramming?

Any 1993 and newer GM vehicle and 1996 and newer Saturn vehicle equipped with a reprogrammable engine controller (PCM or VCM). Medium duty trucks, the Catera and GEO products cannot be reprogrammed. Go to GM's website to view the most current list of vehicles: HTTP://CALID.GM.COM/vci/html/help1.html .

How do I set up the EASE SPS for On-board reprogramming of GM OBD II vehicles?

1. Connect the serial interface cable to the PC's serial (COM) port and the PC port on the SPS unit.
2. Connect the GM Security Key to the parallel (LPT) or USB port on the PC.

NOTE: The GM Security Key (parallel or USB) is required to use the GM SPS software to reprogram a vehicle.

3. Connect the OBD II Cable to the vehicle's diagnostic connector and the VEHICLE port on the SPS unit.
4. Start the EASE SPS Assistant Software to begin the reprogramming event. Do not start the GM TIS 2000 software. The EASE software will start the GM TIS 2000 software when it is needed.

How do I set up the EASE SPS for On-board reprogramming of GM OBD I vehicles?

1. Connect the serial interface cable to the PC's serial (COM) port and the PC port on the SPS unit.
2. Connect the GM Security Key to the parallel (LPT) or USB port on the PC.

NOTE: The GM Security Key (parallel or USB) is required to use the GM SPS software to reprogram a vehicle.

3. Connect the GM OBD I or OBD II Cable to the vehicle's diagnostic connector and the VEHICLE port on the SPS unit.
4. Connect the Cigarette Plug Power Cable to the 12VDC port on the SPS unit and the vehicle's lighter receptacle.
5. Start the EASE SPS Assistant Software to begin the reprogramming event. Do not start the GM TIS 2000 software. The EASE software will start the GM TIS 2000 software when it is needed.

How do I set up the EASE SPS for Off-board reprogramming of GM OBD II vehicles?

1. Connect the serial interface cable to the PC's serial (COM) port and the PC port on the SPS unit.
2. Connect the GM Security Key to the parallel (LPT) or USB port on the PC.

NOTE: The GM Security Key (parallel or USB) is required to use the GM SPS software to reprogram a vehicle.

3. Look up the Off-board Cable required for the vehicle's controller that you are reprogramming in the tables in Appendix B, C or D. A table is also available in the EASE Software Utility by selecting *How to\Find Off-board SPS Cables* from the menu bar.

IMPORTANT: Just because a cable can connect to a controller does not mean it is the correct cable. Use the cable listed in Appendix B, C, or D or the software. Failure to do so could damage the controller or the SPS unit.

4. Connect the specified cable to the controller and the VEHICLE port on the SPS unit.
5. Connect the 12 VDC **1.5A** adapter to the 12VDC port on the SPS unit and plug the other end into a power source.

IMPORTANT: The power adapter used to power the SPS unit must have an output of **12 VDC and 1.5 Amps**.

6. Start the EASE SPS Assistant Software to begin the reprogramming event. Do not start the GM TIS 2000 software. The EASE software will start the GM TIS 2000 software when it is needed.

Do I need to use the off-board cable listed for a controller? A cable that is not listed also connects to the controller.

Use the cable listed. Just because a cable can connect to a controller does not mean it is the correct cable. Use the cable listed in the appendix of the user's manual or in the SPS software by selecting *How to\Find Off-board SPS Cables* from the menu bar. Failure to do so could damage the controller or the SPS unit.

The label fell off my off-board cable. How do I know which number it is?

A description of each cable follows.

- Cable 1 - Off-board cable with 32 pin clear connector with gray hood.
- Cable 2 - Off-board 2 connector cable: 32 pin blue connector and 24 pin black connector
- Cable 3 - Off-board 2 connector cable: 32 pin blue connector with gray hood and 32 pin smoke connector with gray hood
- Cable 4 - Off-board cable with 32 pin pink connector.
- Cable 5 - Off-board cable with 32 pin light blue connector.
- Cable 6 - Off-board cable with long light gray hood with two 40 pin blue connectors.
- Cable 7 - Off-board cable with 24 pin smoke connector with gray hood.

SOFTWARE REQUIREMENTS

What are the minimum desktop PC requirements?

See Section V. System Requirements.

What Windows operating systems will the TIS software work with?

The TIS software supports Windows 2000 Professional and Windows XP Professional.

SOFTWARE INSTALL/UNINSTALL QUESTIONS

I just received a new Application CD. Do I need to uninstall the existing application before installing the new version?

No. Follow the instructions below to install the new application.

- Insert the new CD in the CD-ROM drive and wait at least 20 seconds for the CD to spin up.
- Double-click the TIS 2000 icon located on the Windows desktop.
- Click OK at the "TIS 2000" Screen. The Expertec SPS Application CD will install automatically.
- When the Application installation is complete, a "successfully updated" message box will be displayed. Click the OK button and remove the Application CD from the CD drive.

I just received a new Data CD. What do I do?

The new Data CD should be installed. Follow the instructions below to install the data update.

- Insert the new Data CD in the CD-ROM drive and wait at least 20 seconds for the CD to spin up.
- Double-click the TIS 2000 icon on the desktop.
- A TIS 2000 box will appear that says "A new TIS 2000 version is available…" Click the OK button to begin copying files to your computer. This process could take up to 10 minutes.
- When complete, a "successfully updated" message box will be displayed. Click the OK button to close the screen and remove the Data CD from the CD drive.

I just received a new Application and Data CD. Do I need to install both CDs or can I just install the new Data CD?

When a new Application CD is received with a new Data CD, they should both be installed. If you just install the Data CD, the system may not work properly. Install the Application CD before the Data CD. See the previous 2 FAQ questions for Application CD and Data CD installation instructions.

I'm trying to install the GM Data CD and get a message stating 'finish installing the Application software'. I've already installed the Application software. How do I get the Data CD to install?

The Data CD cannot install because the Application software was not installed properly.

- Uninstall the GM Application (To uninstall the Application: from Windows select Start \ Programs \ TIS 2000 \ TIS 2000 Uninstall)
- Place the Application CD in the CD-Drive. The CD will start automatically and begin the install process. Follow the on-screen instructions to install the software. During the installation, you may be prompted to reboot the PC. It is important that you leave the Application CD in the computer when it reboots.
- When the Application installation is complete, a "successfully updated" message box will be displayed. Click the OK button and remove the Application CD from the CD drive.
- Now you can install the Data CD. Insert the new Data CD in the CD-ROM drive and wait at least 20 seconds for the CD to spin up.
- Double-click the TIS 2000 icon on the desktop.
- A TIS 2000 box will appear that says "A new TIS 2000 version is available…" Click the OK button to begin copying files to your computer. This process could take up to 10 minutes.
- When complete, a "successfully updated" message box will be displayed. Click the OK button to close the screen.

How do I uninstall the GM TIS Software from my computer?

To uninstall the GM Application: from Windows select Start \ Programs \ TIS 2000 \ TIS 2000 Uninstall.

To uninstall the EASE SPS Assistant Software: from Windows select Start \ Settings \ Control Panel. Double-click the Add/Remove Programs icon. In the Install/Uninstall tab, select EASE GM Service Programming Assistant then click the Add/Remove button.

I just installed my TIS 2000 software update, and now when the EASE SPS Utility tries to start the TIS 2000 software I get an error that says the exe can't be found. What can I do?

The location of the TIS 2000 **frontend.exe** file was moved in the update. The EASE SPS Software must be pointed to the new location of the file.

- Start the EASE SPS Software and from the software menu select *File**TIS 2000 Location*.
- From the TIS 2000 Executable File Location Screen, select the **Specify Location of TIS 2000 Software** button and change the path of the frontend.exe file. The current path of this file is C:\Program Files\cosids\Bin\frontend.exe.

I'm trying to install the GM Application software and get a TCP/IP error (No Socket Available; No Network Card Available; Unable to Get Echo Service). What is the problem?

A TCP/IP protocol is required on your PC to use the TIS 2000 software. Determine if your computer has a network card and then follow the appropriate instructions below.

If your computer has a network card, check to make sure that a TCP/IP protocol was set up for the network card.

- From Windows Select Start /Control Panel, and then double-click the Network icon.
- In the Configuration Screen, check to see if a Dial-Up adapter or Network Adapter is listed.
- To check if the TCP/IP Protocol has been installed for that adapter, click on the adapter you wish to check.
- Select Properties, and then select Bindings.
- Check to see that the TCP/IP Protocol is listed and the checkbox is selected. If a TCP/IP Protocol is not listed, you must add the TCP/IP Protocol.
- To do this, go back to the Configuration Screen and select Add
- Select Protocol, and then Add again
- Now Select Microsoft, then TCP/IP, and select OK
- The TCP/IP Protocol will now be added. (You may be asked for your Windows CD, to complete the Installation of the TCP/IP Protocol)

If your computer does not have a network card, a Dialup Adapter (Windows 95/98) or a MS Loopback Adapter (Windows NT/2000) must be installed.

To Install a Dialup Adapter (Windows 95/98), follow these instructions.

- Go to Start, select Control Panel, and then double-click Add/Remove Programs
- Select Windows Setup
- Click on Communications and select Details
- Check the box next to Dial-up Networking
- Select OK
- A Dialup Adapter will be installed (You may be asked for Your Windows CD, to complete the Installation of the TCP/IP Protocol)
- You now must check the setup of the Dialup Adapter
- From Windows Select Start /Control Panel, and then double-click the Network icon.
- In the Configuration Screen check to see if a Dial-Up adapter is listed.
- If a Dial-Up adapter is listed, check if the TCP/IP Protocol has been installed
- Click on the Dial-Up adapter
- Select Properties, and then select Bindings.
- Verify that the TCP/IP Protocol is listed and the checkbox selected. If a TCP/IP Dialup protocol is not listed, you must add the TCP/IP Protocol.
- To do this, go back to the Configuration Screen and select Add
- Select Protocol, and then Add again
- Now Select Microsoft, then TCP/IP, and select OK
- The TCP/IP Protocol will now be added. (You may be asked for Your Windows CD, to complete the Installation of the TCP/IP Protocol)

EASE SPS UNIT AND SOFTWARE ASSISTANT QUESTIONS

The Status displayed on the EASE SPS Assistant Software says "COM Error", what do I do?

The SPS software cannot establish communications with the SPS unit. Check the following.

- Make sure the SPS unit is powered correctly. Connect the power transformer to the 12VDC port on the SPS unit and a wall outlet. The SPS unit's LED will flash green momentarily when first powered.
- Make sure the SPS unit is connected, securely to a functioning serial port on the PC. Connect the serial interface cable to the PC port on the SPS unit and the serial (COM) port on the PC.
- Make sure the serial (COM) port the SPS unit is connected to is selected in the Software Utility. To change the COM Port number select *Tools*\ *Select COM Port* from the software menu bar.
- Make sure the serial (COM) port that the SPS unit is connected to is not being used by another device such as a Palm Handheld, EASE Scan Tool software, digital camera etc. Exit or disable the program that has control of the port.

The SPS Problem displayed on the EASE SPS Software says "Bad Firmware" or "Low SPS Battery" what do I do?

The "Bad Firmware" problem means that the firmware stored onboard the unit is corrupt, probably due to a low internal battery. The "Low SPS Battery" problem means that the battery voltage on-board the SPS unit is low and needs to be replaced. For both of these conditions, you need to replace the battery and reload the firmware on the unit. Follow the instructions below.

1. Locate the spare battery for the SPS unit. One was included with your original package. The battery type is CR1225 3.0V/48 mAh Lithium battery.
2. Disconnect all cables that are connected to the SPS unit.
3. Use a 3/16" nut driver to remove the two hex-headed screws next to the DB25 connector on the "Vehicle" endplate of the EASE SPS unit.
4. Use a Phillips screwdriver to remove the two screws from the PC (DB9) endplate.
5. Grab the bezel on the PC end and slide the circuit card out a few inches.
6. Remove the battery and put the new one in.
7. Slide the card back in the case and install the screws into both the endplates
8. Connect the Serial Interface Cable to the PC DB9 port on the SPS unit and the PC's COM port.
9. Power the SPS unit by plugging the AC adapter into the unit and a power source.
10. Start the EASE SPS Assistant Software.
11. Click the Update SPS Firmware button.
12. Enter the capabilities, serial number, and access code information for your SPS, if it is not already there. Then click the Next button.
13. On the next Screen, click the Browse button. The Open Screen will be displayed. In this screen, select the desired firmware file. The file extension for the firmware file is .sps. If you have several to choose from, choose the one with the highest number on the end of the filename. The default folder for the firmware files is C:\EASE Diagnostics\GM_SPS. After you have selected the firmware file, select the Next button.
14. The upload progress is shown. When the firmware file has been successfully transferred to the SPS unit, "…successfully upgraded" will be displayed in the bottom half of the screen. Select the Exit button to close the screen.

    If you were unable to successfully upgrade, check the following and then try again: check the cable connections; make sure the unit is powered by the AC adapter; make sure the SPS utility is configured to the COM (serial) port that you connected the unit to.

I've changed my battery and am reloading my firmware but when I enter my new access code and serial number it tells me it's invalid. What is the problem?

In order for your access code to be valid, you must click the box to the left of the capabilities that you purchased with the tool (OBD1, OBD2, Offboard), so there is a checkmark displayed. Once the correct capabilities have been selected, enter the serial number and access code before clicking the Next button to continue.

If you have recently upgraded to the Service Programming Assistant Software, be sure to enter the "SPA" serial number and access code you were given with the software. Your original serial number is no longer valid.

Where can I buy spare batteries for the SPS unit? Can I get them at Radio Shack?

Spare batteries can be ordered through EASE or your sales representative. EASE Part #: BAT-CR1225. The battery type is CR1225 3.0V/48mAh Lithium Battery. The battery is <u>not</u> available at Radio Shack stores. However, the battery can be special ordered from Radio Shack in packs of 25. Catalog # 960-1707. Order at 1-800-THE-SHACK or www.radioshack.com. You may also be able to find the battery in other retail electronics stores or catalogs. Also Sears sometime sells the batteries in their Watch Repair department.

How often will I have to replace the battery in my SPS unit?

The battery will need to be replaced approximately every 3 months. When the battery level becomes low, the SPS Problem will say "Low SPS Battery" in the EASE SPS Assistant Software.

The SPS Problem displayed on the EASE SPS Assistant Software says "Bad Fuse", what do I do?

The fuse used to protect the SPS Unit from short-circuited off-board controller hookups is blown. The fuse is usually blown when analyzing or reprogramming an off-board controller, which has an internal problem or is wired the wrong way.

1. The fuse used by the SPS unit is a 5x20 mm 1.6A SloBlo fuse. If you do not have a spare fuse, call EASE or your sales representative to order one.

IMPORTANT: Replace the fuse only with the one specified. Failure to do so could damage the SPS unit and/or the controller that you are reprogramming.

2. Disconnect all cables that are connected to the SPS unit.
3. Use a 3/16" nut driver to remove the two hex-headed screws next to the DB25 connector on the "Vehicle" endplate of the EASE SPS unit.
4. Use a Phillips screwdriver to remove the two screws from the PC (DB9) endplate.
5. Grab the bezel on the PC end and slide the circuit card out. The fuse is located under a black fuse cover near the DB25 end of the SPS unit.
6. Remove the fuse and put the new one in.
7. Slide the card back in the case and install the screws into both the endplates

The SPS Problem displayed on the EASE SPS Assistant Software says "Low Vehicle Battery", what do I do?

The vehicle's battery is too low to allow an in-vehicle reprogramming process. Replace or recharge the vehicle's battery before attempting a reprogramming session. Do not reprogram the vehicle when a battery charger is connected to it.

GM TIS 2000 REPROGRAMMING QUESTIONS

I've just received my new hardware lock, but I get an error message saying that there is no hardware key found when I run the software. What do I do?

- Be certain to verify that you have the latest version of the TIS 2000 Installed on your computer. (Version 2.4) If not, be certain to contact EASE to obtain the latest version.
- Be certain to use the prompts during the installation of the program, as to which hardware key you have. If you choose the wrong key, the incorrect driver for that key will be installed, and the TIS 2000 software WILL NOT OPERATE. If you already have the latest version, and have obtained a new hardware key, the TIS 2000 program will need to be un-installed, and re-installed. This is necessary to load the appropriate driver for the hardware key that you have.

I run the EASE SPS Assistant, which starts the TIS 2000 software. The Preparing for Communication screen in the TIS 2000 software states 'Connect Tech 2 to vehicle' but I don't have a Tech 2. In fact, Tech 2 is mentioned several times in the TIS 2000 software. Do I need a Tech 2?

No, a Tech 2 is not required with the EASE SPS. The General Motors TIS 2000 software is made to use with their Tech 2, but when used in conjunction with the EASE SPS software and hardware unit, the Tech 2 is not needed. Replace Tech 2 in the instructions with the EASE SPS hardware unit.

I run the EASE SPS Assistant and connect to the COM port fine, but when the TIS 2000 software starts, it can't find the VIN number when connecting to the vehicle. What is wrong?

The correct COM port may not be selected in the TIS 2000 software.

- If your TIS 2000 Application Version is prior to 1.05: Make sure the serial interface cable that is connected to the EASE SPS unit is plugged into to COM 1 (serial port) on the PC. Prior to version 1.05, the GM TIS 2000 software, will only communicate with COM 1 even though it lists multiple COM port selections.
- If your TIS 2000 Application Version is 1.05 or higher: Make sure the correct COM port number is selected in the TIS 2000 software. To change the COM port number in the TIS 2000 software, select *Configuration\ I/O Management* from the software menu bar. Select Pass Through Properties and then select the COM port that the SPS is connected to. It should be the same COM Port number that you selected for the EASE SPS Software.

I run the EASE SPS Assistant and connect to the COM port fine, but when the TIS 2000 software starts, a message is displayed that states it can't find the hardware key. What is wrong?

- The hardware key (GM Security Interlock) must be on the 25 pin parallel (printer/LPT) port. Ensure that the hardware key is NOT on a 25 pin serial port.
- It's possible that the processor in the PC does not meet the minimum requirements. The processor needed for the TIS 2000 software to run properly is a Pentium II 400 MHz processor (or greater). No other types of processors are supported. Refer to the minimum system requirements.
- A computer that is 650 MHz or faster may require a patch file installed in order to see the hardware lock. Version 1.61 of the EASE SPS Utility has the patch file located on the installation CD in a folder called Hardlock. See the Readme.txt file in the Hardlock folder for more information on loading the patch file. If you have a previous version of the SPS Utility, contact EASE for the patch file. Note: Only load the patch file if you get the error message stating it can't find the hardware key.
- The software is loaded on a Laptop Computer. Laptops are not supported, only desktop PCs. Refer to the minimum system requirements
- If none of the above is the problem, contact technical support for assistance.

I get an 'Ignitions/Battery Voltage Too Low' error when I try to reprogram a controller off-board, yet I can program the same controller on-board (in the vehicle). What could be wrong?

The power adapter used to power the SPS hardware unit must have an output of 12 Volts and 1.5 Amps (or 1500 mA). A power adapter with an output or 0.5 or 1.0 Amp is not adequate to power the unit.

I'm getting an error I don't understand in the TIS 2000 software. What should I do?

- If you are programming the controller off-board and the error is Ignition/Battery Voltage Too Low, ensure that the power adapter you are using to power the SPS box has an output of 12 Volts and 1.5 Amps (or 1500 mA).
- If you are getting an error that says it cannot find the VIN and you are using something other than COM Port 1, ensure that you have changed the COM Port number in the TIS 2000 software.
- For all other TIS 2000 error messages, contact technical support for assistance.

I'm reprogramming an OBD II Saturn controller on-board and the TIS 200 software displays a message about using the Red Tech 2 connector. I only have a black OBD II connector, what do I do?

The Saturn needs a special DLC cable with the Tech 2 as the power requirements are different. The EASE SPS Utility accounts for this power difference so no special cable is needed. Use the EASE DLC cable as always when reprogramming OBD II on-board vehicles.

Do I need to run the EASE SPS Assistant Software to reprogram a controller?

Yes, the EASE SPS Assistant MUST be used to reprogram a controller using the EASE SPS Reprogramming unit. There is a TIS 2000 icon on the desktop, but this is only to be used when installing Data CD updates. When reprogramming a controller, the EASE SPS Assistant must be used which will start the TIS 2000 software at the appropriate time.

I just finished reprogramming a controller and now the vehicle starts but then stalls. What is wrong?

You must run the Theft Relearn procedure. For more information on relearn procedures, run the EASE SPS Assistant Software and from the software menu bar select

How To\Perform Controller Learn Procedures.

I just finished reprogramming a controller and the software states that I need to perform a Crankshaft Relearn Procedure. How do I do it?

For information on the Crankshaft Relearn Procedure, run the EASE SPS Assistant Software and from the software menu bar select

How To\Perform Controller Learn Procedures.